

Iowa Crash Analysis Tools

Intersection Magic (Iowa configuration)

For more information:

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Iowa Statewide License
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Background

Several years ago, the Iowa DOT Office of Traffic and Safety (TAS) commissioned a study by the Center for Transportation Research and Education (CTRE) at the Iowa State University to determine how automated collision diagramming capability could best be attained. Proprietary software, Intersection Magic (IM), was chosen as the best and most cost-effective way for Iowa to do this. Initially, only TAS had a license and access to Iowa crash data formatted for this software.

Statewide License

Not long thereafter, a statewide license (lump sum plus annual fee) was arranged with the vendor. Although there are many state agency and city users of Intersection Magic, only a few states have opted for a statewide license. The statewide license permits the Iowa DOT to provide Intersection Magic software to persons with a legitimate reason to analyze Iowa crash data, including consultants. Iowa uses state funds from the Traffic Safety Improvement Program (derived from the state road use tax fund) for financing this program.

According to the terms of our license, TAS is responsible for duplication and distribution, for a user guide of the Iowa configuration, and for first level user support. Michael Pawlovich wrote the Iowa Configuration User Guide and provides this user support. Distribution began late winter 2000 and has reached about 100 users statewide.

User Participation

At first, it was thought that perhaps 15 or 20 Iowa cities would use IM plus a few urbanized counties and regional agencies. We didn't know how many of the state's engineering consulting firms would want it. As it turned out, about two or three times as many county engineering offices and consultants wanted the software than was anticipated. Since a user can be supplied at under \$10 each for materials (cost borne by state or federal program funds), more users add little to the overall expense while increasing the safety impact. We think it will take several years for users to determine if this software is something they'll use regularly, or if it is something that will eventually sit on a shelf. For such a small investment, we are willing to give everyone a chance to decide for themselves.

At least one Iowa city had its own legacy crash database configured differently from the Iowa DOT-supplied crash data. This city contracted with the IM vendor to configure IM to its desired

format, but it did not need to pay a license fee to use the product—that was covered in the statewide license. Of course, if this helps a city with safety analysis, it is fine by us. While we are committed to reducing redundancies in data manipulations, the customer agency must decide when local safety needs are best served by keeping or evolving away from a legacy data system.

Anticipated Changes

Since Intersection Magic was configured while Iowa still was using the link-node location methodology, users must still understand that system to do queries. The ArcExplorer Node Map lookup CD (also used for Access ALAS) is distributed along with a single program/data CD for Intersection Magic. It is hoped that IM can be migrated to the coordinate system soon after this step is completed for Access ALAS.

Additional changes for the Iowa Configuration of IM include changing to the new crash report form and possible incorporation into other analysis software so that the many users who work with not just one, but two or three of our analysis tools, can use them seamlessly.